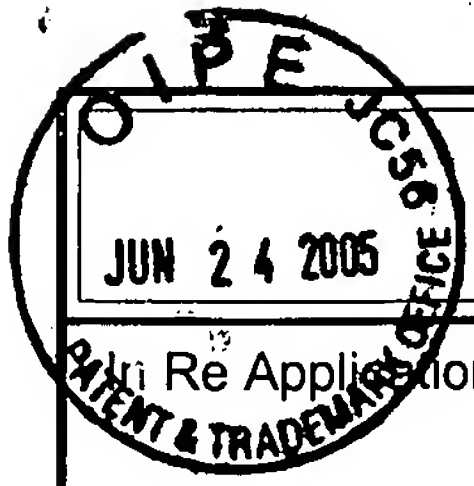


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TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.  
202-0958

In Re Application Of: Tong

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/604,595	08/01/03	Joyce, Harold	32242	3749	1594

Invention: SYSTEM FOR DYNAMIC AIRFLOW CONTROL IN A PAINT BOOTH USING MULTIPLE AIR SUPPLY PLENUMS

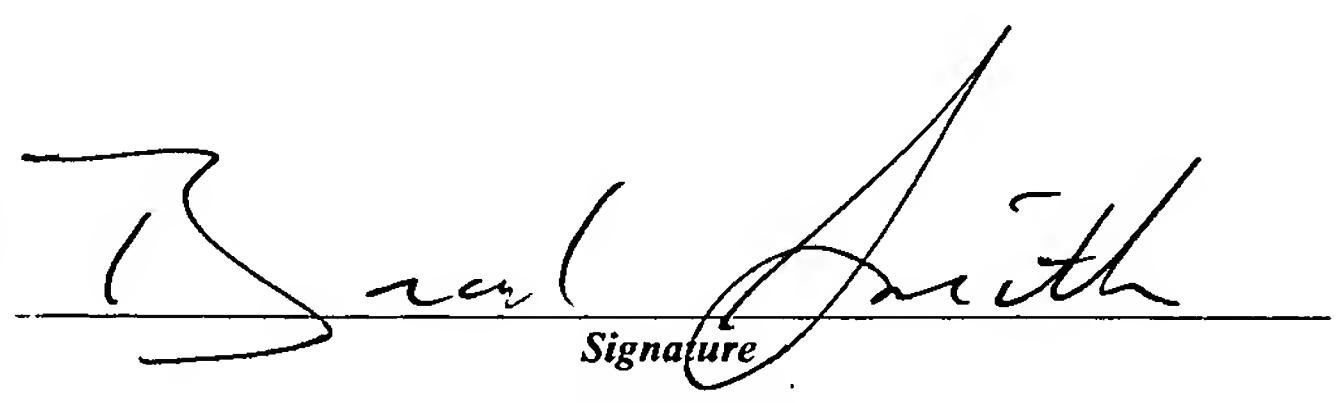
COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on April 26, 2005.

The fee for filing this Appeal Brief is: \$500.00

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- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 06-1510
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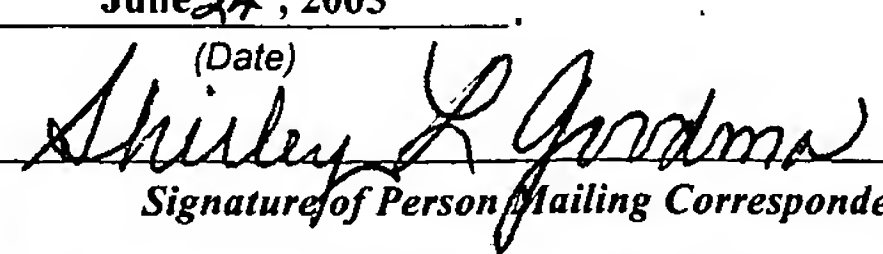
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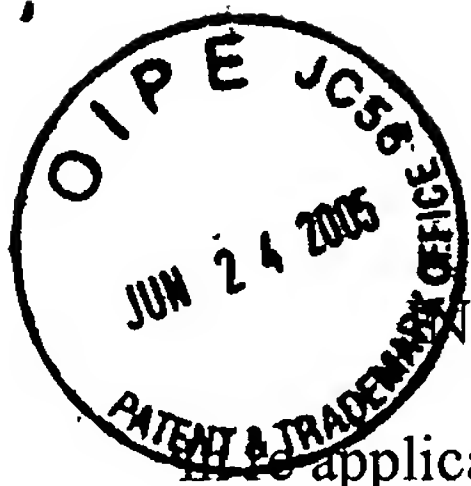
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**Express Mail**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on	
June 24, 2005	(Date)
	
Signature of Person Mailing Correspondence	
Shirley L. Goodman	
Typed or Printed Name of Person Mailing Correspondence	

CC:



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Tong

Serial No.: 10/604,595      Group Art Unit: 3749  
Filed: August 1, 2003      EXAMINER: Joyce, Harold  
For: SYSTEM FOR DYNAMIC AIRFLOW CONTROL IN A PAINT  
BOOTH USING MULTIPLE AIR SUPPLY PLENUMS

Attorney Docket No.: 202-0958

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

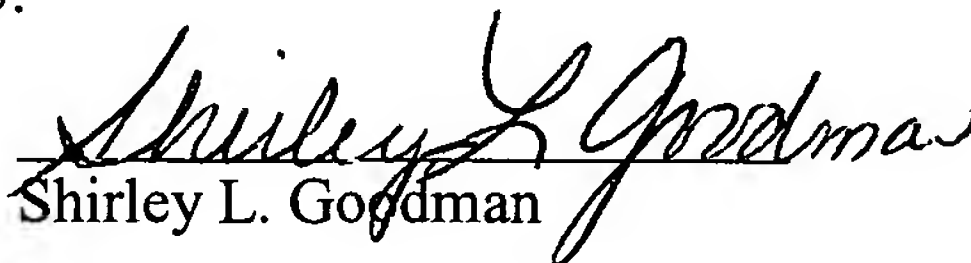
**APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37**

Dear Sir:

Appellant submits, in triplicate, the following Appeal Brief pursuant to 37 C.F.R. §41.37 for consideration by the Board of Patent Appeals and Interferences. Please charge the \$500 cost of filing this appeal brief, as required under 37 C.F.R. §41.20(b)(2), to deposit account 06-1510. Please charge any additional fees required or credit any overpayment to the same deposit account.

**Certificate of Mailing**

I hereby certify that this Appeal Brief Pursuant to 37 C.F.R. § 41.37 is being deposited with the United States Postal Service, Express Mail postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on this 24<sup>th</sup> day of June 2005.

  
Shirley L. Goodman

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### **Statutes**

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**I. REAL PARTY IN INTEREST**

Ford Motor Company is the assignee of all rights in this invention and is the real party in interest.

**II. RELATED APPEALS AND INTERFERENCES**

Neither Appellant, Appellant's representatives, nor Ford Motor Company (assignee) knows of any appeal, interference or judicial proceeding that may be related to, that will directly affect or that will be directly affected by or have a bearing on the Board's decision in the present appeal.

**III. STATUS OF CLAIMS**

Claims 1-10 and 12 have been finally rejected under 35 U.S.C. §103(a). Claim 11 has been allowed. Appellant seeks allowance of all the rejected claims.

**IV. STATUS OF AMENDMENTS**

No amendment has been filed subsequent to the final rejection.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates to a system and method for handling airflow in a paint booth. The core of Appellant's claims is a system that permits precise dynamic adjustment and control of the velocity of the downdraft air (which carries the sprayed paint) that strikes generally horizontal workpiece surfaces. Appellant's claimed system includes a secondary air supply plenum (30, figs. 1 & 3), enclosed within a primary air supply plenum (20, figs. 1 & 2), and having a secondary plenum outlet (33, fig. 1) adjacent to the primary plenum outlet (24, fig. 1) and above a paint spray device (40, figs. 1 & 2) and above a workpiece (50, fig. 1).<sup>1</sup> An adjustable damper (32, figs. 1, 2, 3) controls the amount of air entering the secondary plenum inlet (31, figs. 1, 2, 3), thus also controlling the velocity of the airflow exiting the secondary plenum and striking the workpiece. An anemometer (60, figs. 1 & 2) continuously measures the velocity of the air near the workpiece surface and in "real time" sends a signal to a motor controlling the adjustable damper to maintain desired air velocity. The present invention may be usefully combined with variable density filter media (70, 71, 72, 73, figs. 1-5) extending across portions of the primary and secondary plenum outlets to further control airflow velocities in desired patterns below the plenum outlets.

The claimed system and method focuses on dynamic control of air velocity, not air volume, to control paint spray more precisely – *e.g.*, to facilitate thicker application of paint – on horizontal workpiece surfaces. The claimed invention is also a significant improvement over the prior art at accommodating temperature and humidity fluctuations and sudden air pressure changes that are routinely encountered in practice.

---

<sup>1</sup> See generally specification paragraphs 15-16 and accompanying drawings.

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. The examiner's rejection of claims 1, 7-10 and 12 under 35 U.S.C. §103(a) as being obvious and unpatentable over either Milojevic et al. (US 5,762,548) or Josefsson (UK patent app. 2 124 752A) in view of Tong, et al. (US 6,146,264).
2. The examiner's rejection of claims 2-6 under 35 U.S.C. §103(a) as being obvious and unpatentable over either Milojevic et al. or Josefsson as applied to Claim 1, and further in view of Tong et al. (US 6,139,421).
3. The examiner's rejection of any claim to the extent such rejection was based on an "adapted to ..." clause within such claim.

## VII. ARGUMENTS

### A. The Examiner Failed to Consider Appellant's Claimed Invention as a Whole.

When applying 35 U.S.C. §103, the claimed invention must be considered as a whole. MPEP § 2141. In determining the differences between the prior art and the claims, the question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. MPEP § 2141.02, citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983).

Appellant's claimed invention combines a "plenum within a plenum" structure, a focus on measuring the velocity of air and paintspray near the workpiece, and dynamic real-time control of air supply based at least partly on these air velocity measurements. Appellant's dependent claims add limitations addressing the use of variable density filter media (instead of fixed dampers and ductwork) to further control air velocity within portions of the paint booth (dependent Claims 2-6), and claims addressing the design of a system specifically adapted to paint generally horizontal workpiece surfaces (dependent Claims 7-10). Even if all of these elements were present in the prior art, which Appellant denies, the combination of them to produce the claimed invention *as a whole* is novel and unobvious.

### B. The Examiner Has Not Made a Prima Facie Case of Obviousness for Claims 1, 7-10 and 12.

Claims 1, 7-10 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over either Milojevic et al. (US 5,762,548) or Josefsson (UK patent app. 2 124 752A) in view of Tong, et al. (US 6,146,264). The examiner states that it would be obvious to one having ordinary skill in the art at the time the invention was made to



provide the paint booth of Milojevic et al. or the United Kingdom patent with an airflow detector, as taught by Tong et al. in order to control cross flow.

“Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case.” MPEP § 2141 (emphasis in original).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the Appellant’s disclosure.

MPEP § 2143. Appellant submits that the combinations of Milojevic or Josefsson in view of Tong (’264) fail each of these three criteria as applied to claim 1 and as applied to dependent claims 7-10 and 12.

1. **There is no suggestion or motivation in the references to modify the references or combine their teachings to make Appellant’s claims obvious.**

The examiner did not satisfy his initial burden of providing some suggestion of the desirability of combining (1) a plenum within a plenum with (2) a velocity measuring device between the plenum outlet and the workpiece and (3) a means to dynamically control air velocity at the workpiece surface. “[E]ither the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to be obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat.

App. & Inter. 1985); MPEP § 2142 (initial burden on examiner to show suggestion of desirability).

None of the references suggest Appellant's claimed combination, nor did the examiner present a convincing line of reasoning why such a combination would have been obvious. Rather, the examiner concluded essentially that Appellant's claimed plenum structure had already been disclosed by Josefsson and Milojevic, and simply asserted without *any* reasoning that it would have been obvious to one skilled in the art to add a velocity flow detector near the workpiece surface. *See* Detailed Office Action 1/28/2005 at ¶2. Without support for this assertion, no prima facie case of obviousness can be made. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) (reversing examiner's and Board's finding of obviousness of substituting one type of detector for another in the nitrogen detection system of the primary reference where there was no support or explanation of this conclusion).

**a.      There is no suggestion or motivation to place a velocity detector near the workpiece.**

Appellant's claimed invention permits dynamic adjustment of downdraft air velocity at one or more critical locations within the paint booth in real time, *i.e.*, many adjustments per second. The application emphasizes this aspect in its title and throughout the specification. *See* paragraph 6 (discussing active control of airflow and dynamic adjustment of airflow over workpiece in real time); paragraph 7 (discussing active control of air supplied to secondary plenum permitting accurate adjustment for variable conditions even in systems also using other dynamic adjustment systems). In response to the first office action, Appellant amended Claim 1 and Claim 12 to make this an explicit limitation.

Although the prior art recognizes the utility of having different downdraft velocities in different portions of a paint booth, and although the prior art discloses several means of permitting adjustment of airflow in those portions, the prior art neither teaches nor suggests dynamically adjusting air velocity within key areas of a paint booth based on continuous measurements of data, including changes in air velocity at multiple locations. *Compare* Specification paragraph 17 (damper controller adaptable to receive variety of input variables, including air velocities, atmospheric pressure at various locations, position of paint spray applicator, etc.). Instead, previous systems typically required an expensive and laborious iterative process of measuring and adjusting airflows. These features of the prior art were not well suited to accommodate changes in temperature, humidity, and air pressure that are routinely encountered in practice.

Appellant's invention combines the capability i) to measure and ii) to control downdraft velocity near the workpiece surface. Tong '264 deals primarily with controlling cross flows of air *between adjacent paint booth chambers* that result from pressure imbalances between chambers. The '264 patent discloses a closed-loop airflow system to control the cross flow of air throughout an entire multiple-chamber paint booth, and claims using an anemometer to measure velocity along two axes to facilitate production of desired "target" velocities of 1) down flowing air at the abutment "air curtain" between chambers, and 2) cross flowing air between chambers at multiple locations within a paint booth system. Tong ('264) at columns 5 and 6 and Claim 2. Tong ('264) did not address measurement and control of air velocity at the workpiece surface.

The fact that a paint booth system *could* be modified to measure air velocity near the workpiece surface using an anemometer like that disclosed in Tong '264 is not a proper grounds for a §103(a) rejection absent a suggestion or motivation in the reference to do so. *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990).

Again, there is no suggestion or motivation in the cited references to measure air velocity continuously at the workpiece. Why? Simply because prior to Appellant's invention, there was no effective means to dynamically adjust air velocity based on continuous velocity readings. In the "real world" of automotive finish applications, the ability to dynamically control downdraft velocity impacting the workpiece is a very significant improvement over the prior art.

**b.      There is no suggestion or motivation to enclose a secondary plenum within a primary plenum.**

Milojevic and the UK patent both disclose systems in which fresh air supplied from a common source is segregated to separate compartments located above different portions of a paint booth through the use of ductwork with adjustable dampers or apertures. The two patents teach two different methods of segregating airflow through elaborate ductwork to different parts of a paint booth in order to achieve differential airflow velocities within different portions of the booth.

Appellant respectfully disagrees with the examiner's contention that the prior art discloses a "plenum within a plenum" configuration.<sup>2</sup> Neither reference suggests that their air handling systems be modified to enclose a secondary air supply plenum entirely within a primary plenum in the manner claimed by the Appellant, *i.e.*, with primary and

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<sup>2</sup> "The secondary plenum of Milojevic et al. or the United Kingdom patent is clearly shown to be enclosed with the primary plenum. Hence, there need be no teaching showing this feature." Examiner's Advisory Action (mailed April 20, 2005) at ¶11.

secondary plenum outlets. Rather, the prior art discloses a series of successive air compartments or ducts. The examiner's failure to address all of the limitations in Claim 1, *i.e.*, the limitation of "adjacent" plenum outlets, is addressed further in Sec. VII(B)(3) below.

Indeed, the configurations of the Milojevic and Josefsson air supply systems *teach away* from focused control and adjustment of air velocity directly above the horizontal portion of a workpiece (see dependent Claims 7-10). Milojevic describes a system where the controllable air supply segments extend across the *entire width* of the paintbooth chamber. US 5,762,548 column 6 lines 10-11. Similarly, Josefsson describes a system where downdraft is varied in three zones oriented laterally along the *entire length* of the paintbooth chamber. UK 2 124 752 A page 2 lines 33-34.

In contrast, Appellant's claimed invention adopts a very different and counterintuitive method of segregating airflow, one which requires far less ductwork and space than the elaborate systems disclosed by Milojevic and Josefsson, and one which permits far more targeted application and precise control of airflow velocity impacting the critical horizontal portion of the workpiece, permitting different downdraft velocities forward, aft, and to either lateral side of the workpiece. The prior art contains no suggestion or motivation to pursue the claimed system and method.

## **2. The References Suggest No Reasonable Expectation of Success of Fully Enclosing a Secondary Plenum.**

Nothing in the art referenced by the examiner indicates that enclosing a secondary plenum within a primary plenum would lead to effective differentiated air velocity control. In fact, it is very likely that prior art would predict that enclosing a secondary plenum within a primary plenum would *fail* because the functionality of this

configuration depends on Appellant's other novel feature: installing higher average density filter media across the primary plenum outlet and lower average density filter media across the secondary plenum outlet. *See* specification paragraph 16 and dependent claims 3-6. Particularly given this new co-requirement for functionality, there is no reason to expect that Milojevic, Josefsson, or any other person skilled in the art would have expected that fully enclosing a secondary plenum within a primary plenum could effectively function to vary airflow within a paint booth.

### **3. The References do not Teach or Suggest all of the Claim Limitations.**

To establish *prima facie* obviousness, all the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Even if the examiner's contention were correct that the prior art disclosed a secondary plenum enclosed within a primary plenum, Claim 1 and all its dependent claims are further explicitly limited to systems "having a secondary plenum outlet *adjacent to a portion of said primary plenum outlet* and generally above a paint spray applicator and above a workpiece within said paint booth." Neither Milojevic nor Josefsson disclose a secondary plenum within a primary plenum having adjacent outlets. Milojevic discloses an inlet air chamber having no direct outlets to the paint booth. Milojevic's paint booth receives air exclusively from a plurality of successive apertures that are supplied by the inlet air chamber. (US '548 col. 6 lines 1-20). Josefsson discloses a single plenum separated into at upper and lower compartments, again with the



upper compartments having no direct outlets to the paint booth. (UK '752 pg. 2 lines 31-44 and fig. 1).

There is no teaching or suggestion in the prior art for a system having a secondary plenum outlet adjacent to any portion of a primary plenum outlet, nor did the examiner provide any rationale for why this express limitation would be obvious to one ordinarily skilled in the art. Indeed, the examiner apparently gave no patentable weight to this limitation. Appellant respectfully submits that the failure to treat and consider this language as a claim limitation was error. The limitation concerning adjacent primary and secondary plenum outlets is not merely a statement of intended use, rather the “essence of the invention” as it is necessary to define the structure of the paint booth system. *See Boehringer Ingelheim Vet-Medica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345, 65 USPQ2d 1961, 1965 (Fed. Cir. 2003).

**C. The Examiner Has Not Made a Prima Facie Case of Obviousness for Claims 2-6.**

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Claims 2-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over either Milojevic et al. or Josefsson as applied to Claim 1, and further in view of Tong et al. (US 6,139,421). The examiner states that Milojevic or Josefsson disclose the claimed invention except for the variable density filter media, that Tong et al. ('421) teaches that it is known to provide a paint booth with variable density filter media, and that it would be obvious to one having ordinary skill in the art at the time the invention was made to provide the paint booth of Milojevic et al. or Josefsson with variable density filter media as taught by Tong ('421) in order to promote uniform flow.

**1. Claims 2-6 should be allowed because they depend on Claim 1.**

“If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious.” MPEP § 2143.03, *citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claims 2-6 depend from Claim 1 and therefore should be allowed based on the foregoing arguments.

**2. There is no suggestion or motivation to install variable density filter media to enable secondary plenum enclosure.**

Tong (US 6,139,421) does disclose using variable density filter media in a paint booth to control airflow velocity at different portions of the booth. However, '421 neither teaches nor suggests using variable density filters as a flexible and cost effective means of creating the necessary air pressure differential between a primary plenum and enclosed secondary plenum. See Claim 3 & Specification paragraph 16 (claiming and discussing functionality of average unit densities across primary plenum and secondary plenum outlets). Nor do the other cited references suggest using variable density filter media to achieve the necessary pressure differential, versus more conventional damper or aperture restrictions.

Again, it is important that Appellant's claimed invention be considered as a whole when assessing whether his claims are obvious. MPEP § 2141.02. Appellant's claimed variable density filter media system is a part of a larger system. There is no suggestion or motivation in the prior art to install variable density filter media in the manners claimed by the Appellant because there was no motivation to install such a system prior to Appellant's invention of his air supply system.

Appellant's claimed invention produces superior and more consistent paint finish results compared to any previously known airflow control technique, using a simple but



elegant approach that is both relatively uncomplicated and highly adaptable to various environmental conditions and paint applications. Appellant's claimed invention is also particularly well adapted for use in multi-cell systems where air supplied to various paint booth cells is frequently adjusted in order to balance lateral airflows between cells. For the reasons set forth above, the cited references neither teach nor suggest Claim 1 or the dependent claims.

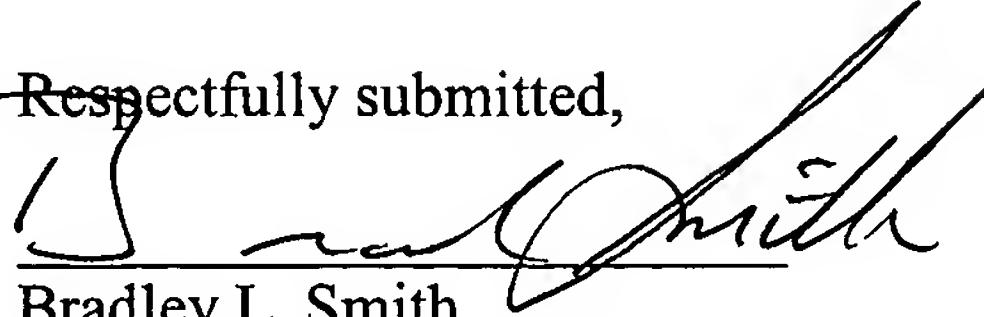
**D. Appellant's "Adapted To" Clauses Permissibly Describe Function.  
They Are Not Intended to Differentiate Claims From Prior Art.**

Appellant respectfully traverses as misplaced or irrelevant the examiner's objection that his "adapted to . . ." clauses do not distinguish his claimed features from the prior art in terms of structure rather than function. Final 1/28/2005 Office Action, page 4. The limitations in Claim 1 that employ the "adapted to" clause describe a paint booth having more than one plenum outlet and an airflow detector capable of sending a velocity signal, e.g., an anemometer. The limitations containing the "adapted to" clause, although necessary to Appellant's claims, do not differentiate his claims from the prior art, *nor are they intended to*. Indeed, the limitations using the "adapted to" language are not the subject of the examiner's obviousness objections under 35 U.S.C. §103(a).

**CONCLUSION**

For the foregoing reasons, Appellant respectfully requests that Claims 1-12 be allowed as presented.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Bradley L. Smith", is written over a horizontal line.

Bradley L. Smith

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Attorney for Applicant/Appellant

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Dated: June 24, 2005



## VIII. CLAIMS APPENDIX

- Claim 1. A system for handling airflow in a paint booth, comprising:
- a paint booth adapted to receive airflow from two or more plenum outlets located above the paint booth;
  - a primary plenum supplied with higher pressure air by an air source and having a primary plenum outlet;
  - a secondary plenum, enclosed within the primary plenum and supplied with air by the primary plenum, with said secondary plenum having a secondary plenum outlet adjacent to a portion of said primary plenum outlet and generally above a paint spray applicator and above a workpiece within said paint booth;
  - an airflow detector, within the paint booth near said paint spray applicator, adapted to transmit a signal corresponding to the velocity of the airflow between the secondary plenum outlet and said workpiece; and
  - an adjustable damper adapted to dynamically control airflow from the primary plenum to the secondary plenum based at least in part on the real-time value of said air velocity signal.
- Claim 2. An airflow handling system according to Claim 1, further comprising variable density filter media across both of said plenum outlets, with said variable density filter media creating differential air velocity flows at various locations in said paint booth.

- Claim 3. An airflow handling system according to Claim 2, wherein the filter media at the secondary plenum outlet is less dense than the average filter media density at the primary plenum outlet.
- Claim 4. An airflow handling system according to Claim 3, wherein the filter media at the primary plenum outlet is comprised of a combination of higher density filter media and lower density filter media.
- Claim 5. An airflow handling system according to Claim 4, wherein said filter media has a relatively higher density at a plurality of locations at the primary plenum outlet, thereby creating low velocity airflow beneath said locations within the paint booth.
- Claim 6. An airflow handling system according to Claim 5, wherein said filter media has a relatively lower density at a plurality of locations at the primary plenum outlet thereby creating high velocity airflow beneath said locations within the paint booth.
- Claim 7. An airflow handling system according to Claim 1, wherein said paint spray applicator is adapted to paint generally horizontal surfaces.
- Claim 8. An airflow handling system according to Claim 1, wherein the secondary plenum is adapted to minimize the airflow impinging directly on said paint spray applicator.

- Claim 9. An airflow handling system according to Claim 8 wherein an airflow restrictor is located at the secondary plenum outlet directly above said paint spray applicator.
- Claim 10. An airflow handling system according to Claim 8, wherein the secondary plenum outlet is divided into a forward secondary plenum outlet section located forward of said paint spray applicator and an aft secondary plenum outlet section located aft of said paint spray applicator.
- Claim 11. A system for handling airflow in a paint booth comprising:
- a paint booth adapted to receive airflow from two or more plenum outlets located above the paint booth;
  - a primary plenum supplied with higher pressure air from an air source and having a primary plenum outlet;
  - a secondary plenum within the primary plenum, supplied with air by the primary plenum and having a secondary plenum outlet adjacent to a portion of said primary plenum outlet and generally above a paint spray applicator within said paint booth, wherein relatively low density filter media extends between the secondary plenum outlet and the balance of the paint booth, and wherein the secondary plenum outlet has one or more airflow restrictors directly above the paint spray applicator;
  - a variable density filter media extending across the primary plenum outlet, with relatively higher density media being installed at a plurality of locations at the primary plenum outlet, thereby creating lower velocity airflow beneath said locations within the paint booth, and with relatively lower density media

being installed at a plurality of locations at the primary plenum outlet, thereby creating high velocity airflow beneath said locations;

an airflow velocity detector within the paint booth and near said paint spray applicator, adapted to transmit a signal corresponding to air velocity below the secondary plenum outlet; and

an adjustable damper for controlling airflow from the primary plenum to the secondary plenum based at least in part on the value of said air velocity signal.

Claim 12. A method of controlling airflow velocity in a paint booth comprising:

supplying air under pressure to a primary plenum having a primary plenum outlet located above a paint booth;

supplying air from the primary plenum to a secondary plenum that is enclosed within the primary plenum, with said secondary plenum having a secondary plenum outlet located generally above a paint spray applicator and above a workpiece within said paint booth;

using an airflow velocity detector, installed in the airflow between the secondary plenum outlet and said workpiece, to generate a signal corresponding to air velocity beneath the secondary plenum outlet; and

dynamically controlling the air supplied to the secondary plenum in real time by adjusting a damper at a secondary plenum inlet based at least in part on the value of said air velocity signal.

**IX. EVIDENCE APPENDIX**

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**X. RELATED PROCEEDINGS APPENDIX**

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